

Part I. Select the one lettered answer or completion that is best in each question. (20%)

1. The recommended maintenance dose of aminophylline for children is 1.0 mg/kg/hour by injection. If 10 ml of a 25 mg/ml solution of aminophylline is added to a 100 ml bottle of dextrose, what should be the rate of delivery in ml/hour for a 44-pound child?
(A) 2.3 (B) 8.0 (C) 18 (D) 24 (E) 36
2. Adalat OROS is a controlled-release dosage form which applies the principle of
(A) matrix device (B) ion-exchange resin complex
(C) hydrocolloid system (D) osmotic pump (E) coated granules
3. After peroral administration, drugs generally are absorbed best from the
(A) buccal cavity (B) stomach (C) duodenum
(D) ileum (E) colon
4. The earliest evidence that a drug is stored in tissue is
(A) an increase in plasma protein binding
(B) a large apparent volume of distribution (V_d)
(C) a decrease in the rate of formation of metabolites by the liver
(D) an increase in the number of side effects produced by the drug
(E) a decrease in the amount of free drug excreted in the urine
5. Which of the following therapeutic advantages cannot be obtained by the use of prodrugs?
Increased
(A) oral absorption (B) water solubility (C) duration of action
(D) potency (E) palatability
6. Which of the following drugs is considered to be the agent of choice for anaphylactic reactions?
(A) Clonidine (B) Isoproterenol (C) Epinephrine
(D) Phenylephrine (E) Terbutaline
7. Which of the following insulins can be administered intravenously?
(A) Regular insulin (B) Isophane insulin (NPH)
(C) Protamine zinc insulin (D) Semilente insulin
(E) Ultralente insulin
8. Intrasynovial injection refers to injection into the
(A) muscle mass (B) subcutaneous tissue (C) spinal fluid
(D) superficial skin layer (E) joint fluid

(背面仍有題目,請繼續作答)

9. The peripheral vein may be considered a suitable route for intravenous administration in which of the following situations?
- (A) When an irritating drug is given
 - (B) When hypertonic drugs are given
 - (C) For long-term therapy
 - (D) For administering dextrose 15% as parenteral nutrition
 - (E) For postoperative short-term therapy
10. Procedures for the safe handling of antineoplastic agents include all of the following EXCEPT
- (A) use of Luer-Lok syringe fittings
 - (B) wearing double-layered latex gloves
 - (C) use of negative-pressure technique when medication is being withdrawn from vials
 - (D) wearing closed-front, surgical-type gowns with cuffs
 - (E) use of horizontal laminar flow hood
11. Factors that affect the absorption of drugs in the elderly include all of the following EXCEPT
- (A) lengthened gastric emptying time
 - (B) decreased plasma albumin
 - (C) elevated gastric pH
 - (D) decreased intestinal blood flow
 - (E) decreased gastrointestinal motility
12. Which of the following organisms has been implicated as a possible cause of chronic gastritis and peptic ulcer disease?
- (A) *Campylobacter jejuni*
 - (B) *Escherichia coli*
 - (C) *Helicobacter pylori*
 - (D) *Calymmatobacterium granulomatis*
 - (F) *Giardia lamblia*
13. Which of the following statements concerning glucose system parenteral nutrition is true? It
- (A) requires central venous administration
 - (B) should be discontinued without tapering
 - (C) requires the daily administration of lipid emulsion
 - (D) cannot provide adequate calories for the highly stressed patient
 - (E) requires daily serum triglyceride monitoring
14. Which amino acid solution would be best tolerated in patients with liver disease and encephalopathy?
- (A) Low-branched chain, high-aromatic amino acid solution
 - (B) Essential amino acid solution
 - (C) Low-aromatic, high-branched chain amino acid solution

- (D) Glutamine-enriched amino acid solution
(E) Methionine- and cysteine-enriched amino acid solution
15. Plastics are normally sterilized with
(A) direct flame (B) oven heat (C) ethylene oxide
(D) steam under pressure (E) steam under vacuum
16. A vitamin that stains the urine is
(A) Vitamin D (B) thiamine (C) inositol
(D) riboflavin (E) niacin
17. Units for renal clearance are in
(A) mg/L (B) g/L (C) cc/min
(D) mg% (E) none of the above
18. Many diuretics tend to cause depletion of
(A) potassium (B) sodium (C) carbonate ion
(D) urea (E) bicarbonate ion
19. How does rifampin decrease the efficacy of certain oral contraceptives (OC)?
(A) Increases OC renal clearance
(B) Increases OC metabolism via hepatic enzyme induction
(C) Reduces OC systemic circulation via protein binding
(D) Decreases intestinal absorption of OC
(E) None of the above
20. The commonly accepted normal range for fasting plasma glucose concentrations is
(A) 50-70 mg/dL (B) 70-156 g/dL (C) 50-70 g/L
(D) 70-110 mg/dL (E) 120-180 mg/dL

Part II. Give the therapeutic uses of the following drugs.(30%)

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| 1. Tacrolimus | 2. Lamotrigine | 3. Sumatriptan | 4. Isotretinoin |
| 5. Dantrolene | 6. Finasteride | 7. Misoprostol | 8. Teicoplanin |
| 9. Benzbromanone | 10. Pamidronate | 11. Octreotide | 12. Ganciclovir |
| 13. Benzoyl peroxide | 14. Cuprimine | 15. Hydrotalcite | 16. Ifosfamide |
| 17. Acipimox | 18. Propafenone | 19. Simethicone | 20. Nimodipine |
| 21. Midazolam | 22. Kayexalate | 23. Loperamide | 24. Tolperison |
| 25. Meclizine | 26. Clothiapine | 27. Clofoscetil | 28. Levamisole |
| 29. Terazocin | 30. Silver sulfadiazine | | |

(背面仍有題目,請繼續作答)

Part III. 問答題(50%)

1. 請討論在臨床上如何考量藥品療效與藥品不良反應？藥師應可發揮那些功能？(10%)
2. 藥品資訊的來源可區分為：primary, secondary and tertiary；請予以說明並比較其優缺點。(10%)
3. 有那些口服製劑不宜磨粉或嚼碎，請舉例說明。(10%)
4. 何謂 Therapeutic Drug Monitoring？藥師的職責為何？(10%)
5. 全民健保實施後各界對於藥價迭有黑洞之說，立委亦以之質詢詹署長。試闡述您的見解。(10%)